



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

RB T101522-AR
Job Sheet 175604



Part No: RB T101522-AR

Job Qty: 1 ea

Part Name: MAIN & TAIL ROTOR BALANCE AND SPACING SET



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 4/9/18

Job Tracking No: RA272

Due Date: 4/9/18

Created By: Linda Lacelle

Type: Stock

Description:

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Start up Operation	1 Ea		4/9/18	0.00	0.00	Start Up Small Fab		
110	QC	1 pcs		4/9/18	0.00	0.00	QC5		PD 18-04-09
120	QC21-FG	1 Ea		4/9/18	0.00	0.00	QC21		DAS 21 APR 09 2018

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
RB T101522-AR	MAIN & TAIL ROTOR BALANCE AND SPACING SET	1 Ea (1 ea)	100-Start up Operation	5058419

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Start up Operation	RB T101522	1	0	0

inda

Dart Aerospace Ltd.
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Hawkesbury, ON K6A 1K7
CANADA
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Container No: S059195

Part: RB T101522

Job No: 175604

Serial No/Batch: S056399

Revision:

Inspector:

Date: 04/09/18

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY																																																											
☐ Environment	☐ Design	☐ Doc/Data	☐ Equip/Tooling	☐ Handling/Pre	☐ Material	☐ Internal Transport	☐ Tribal Knowledge	☐ LOA	☐ Substation	☐ Past Expiry Date	☐ Misidentified	☐ No Re-verification	☐ Operator	☐ Offset/Setup	☐ Supplier	☐ Training	☐ Use for Testing	☐ Poor Information	☐ Rushing	☐ Product Improvement	☐ Process Improvement	☐ Manufacturing Process	☐ Past Due	☐ Pressure/Forced	☐ Bending	☐ Centre Not Concentric	☐ Cracks	☐ Crimp/Kink/Ripple/Wave	☐ Cuffs	☐ Crushing	☐ Heat Treat	☐ Wave/Twist in Tube	☐ Marks/Chatter	☐ Temperature/Cure	☐ Set-up	☐ BOM/Route	☐ Broken/Damage/Defect	☐ Inspection Incomplete/Unqualified	☐ Contamination	☐ Countersink	☐ Cut Too Short	☐ Instructions Incomplete/Unclear	☐ Drill Holes	☐ Power Loss/Surge	☐ Folio/Program	☐ Grain	☐ Weld	☐ Wrong Stock Pulled	☐ Out of Sequence	☐ Off-set	☐ Mislabeled	☐ Fit/Function	☐ Misaligned/off center	☐ Positioned Wrong	☐ Outside Dimensions	☐ Over/Under tolerance	☐ Part Incorrect	☐ Part Lost/Missing	☐ Part Moved	☐ Drawing	☐ Finish	☐ Misread	☐ Turning Sequence
OTHER : _____																																																															

Inspection Sheet Complete

RA272

Customer QA Ref #

0

Part Number	Batch / Serial #	Quantity	Part Complete	Rev/CHG Current	New Paperwork	New Labels	Disposition	Work order #	Work order instructions
RB T101522	S056399	1	☐ Yes	☐ Yes	☐ Yes	☐ Yes	MISSING		Customer send RB T101522 because part was received not assemble (NCR18-6811). Upon receiving inspection, it was notice that part RB T101576-9 was not conforming to drawing (missing shoulder, see photo). Send completed assembly back to METEC to rework RB T101576-9 as per drawing, and completed the assembly on RB T101522 as per drawing. When received back at dart, make sure part get QC properly to assure completion. Return to customer using original serial number S056399
0		0	☐ Yes	☐ Yes	☐ Yes	☐ Yes			
0		0	☐ Yes	☐ Yes	☐ Yes	☐ Yes			
0		0	☐ Yes	☐ Yes	☐ Yes	☐ Yes			
0		0	☐ Yes	☐ Yes	☐ Yes	☐ Yes			
0		0	☐ Yes	☐ Yes	☐ Yes	☐ Yes			

QC Approval: P.D. _____

Date: 6-Apr-18 _____

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER : _____					

Linda Lacelle

From: Jennifer Renwick
Sent: Friday, April 6, 2018 2:51 PM
To: Linda Lacelle; Patrick Duval
Subject: RE: RA272 (tail rotor balance and spacing set)

Because it's a customer owned part coming in and we don't want to mess with cost?

From: Linda Lacelle
Sent: Friday, April 06, 2018 2:26 PM
To: Jennifer Renwick <jrenwick@dartaero.com>; Patrick Duval <pduval@dartaero.com>
Subject: RE: RA272 (tail rotor balance and spacing set)

Still waiting to see if we need a w/o and PO...no one responded...
If you brought it under an RA – then, yes the w/o needs to be made, but why P/N AR ??

From: Jennifer Renwick
Sent: Friday, April 6, 2018 2:18 PM
To: Linda Lacelle <llacelle@dartaero.com>; Patrick Duval <pduval@dartaero.com>
Subject: RE: RA272 (tail rotor balance and spacing set)

It's under Part Number RB T101522-AR – Sales order 5141 is also for part number RB T101522-AR

Thank you,
Jen

From: Linda Lacelle
Sent: Friday, April 06, 2018 1:09 PM
To: Jennifer Renwick <jrenwick@dartaero.com>; Patrick Duval <pduval@dartaero.com>
Cc: Eric Downing <edowning@dartaero.com>; David Duval <dduval@dartaero.com>; Robert Aboud <raboud@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>
Subject: RE: RA272 (tail rotor balance and spacing set)

I don't see the inventory for the return???

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

From: Jennifer Renwick

Sent: Friday, April 6, 2018 1:03 PM

To: Patrick Duval <pduval@dartaero.com>; Robert Aboud <raboud@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>

Cc: Eric Downing <edowning@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>; David Duval <dduval@dartaero.com>

Subject: RE: RA272 (tail rotor balance and spacing set)

Container # S058419 / Orig SN# S056399

From: Patrick Duval

Sent: Friday, April 06, 2018 12:54 PM

To: Robert Aboud <raboud@dartaero.com>; Jennifer Renwick <jrenwick@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>

Cc: Eric Downing <edowning@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>; David Duval <dduval@dartaero.com>

Subject: Re: RA272 (tail rotor balance and spacing set)

Work order and PO will need to be created first. Parts are on the shear table near the inspection area

Sent from Pat D. Iphone

From: Robert Aboud

Sent: Friday, April 6, 2018 12:49:26 PM

To: Patrick Duval; Jennifer Renwick; Marcel Daviau

Cc: Eric Downing; Linda Lacelle; David Duval

Subject: RE: RA272 (tail rotor balance and spacing set)

I will bring them over to Metec now. Can you bring me the box?

Rob Aboud

Director of Supply Chain

DART AEROSPACE

T 1-613-632-5200 Ext.244

M 1-514-979-6138

www.dartaerospace.com



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

From: Patrick Duval

Sent: Friday, April 06, 2018 12:46 PM

To: Robert Aboud <raboud@dartaero.com>; Jennifer Renwick <jrenwick@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>

Cc: Eric Downing <edowning@dartaero.com>; Linda Lacelle <llacelle@dartaero.com>; David Duval <dduval@dartaero.com>

Subject: RE: RA272 (tail rotor balance and spacing set)

All,

I've completed RA272, as you can see in my RA instruction there's is one part that is not conforming... I've also noted that part will need to be return at METEC in order for them to rework the incorrect part and complete the assembly. I will let you guys debate if you what to do the rework in house, ROUTE's and BOM's will need to be created if that's the case.

Pat Duval

QC Coordinator

T: 1-613-632-5200 ext. 228

www.dartaero.com

pduval@dartaero.com



From: Robert Aboud

Sent: Friday, April 06, 2018 11:43 AM

To: Jennifer Renwick <jrenwick@dartaero.com>; Patrick Duval <pduval@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>

Cc: David Duval <dduval@dartaero.com>

Subject: RE: RA272 (tail rotor balance and spacing set)

Where is the tool now?

Rob Aboud

Director of Supply Chain

DART AEROSPACE

T 1-613-632-5200 Ext.244

M 1-514-979-6138

www.dartaerospace.com



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
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Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

From: Jennifer Renwick

Sent: Friday, April 06, 2018 11:40 AM

To: Patrick Duval <pduval@dartaero.com>; Marcel Daviau <mdaviau@dartaero.com>; Robert Aboud <raboud@dartaero.com>

Cc: David Duval <dduval@dartaero.com>

Subject: RE: RA272 (tail rotor balance and spacing set)

Hi Guys,

This needs to ship back to the customer on Monday.

Thank you,

Jen

From: Patrick Duval

Sent: Friday, April 06, 2018 11:39 AM

To: Marcel Daviau <mdaviau@dartaero.com>; Robert Aboud <raboud@dartaero.com>

Cc: David Duval <dduval@dartaero.com>; Jennifer Renwick <jrenwick@dartaero.com>

Subject: RA272 (tail rotor balance and spacing set)

Importance: High

Rob,

I'm doing the return for the part that the customer not assemble, are we sending this part back to METEC from them to assemble the parts or we are doing it in house.

Pat Duval
QC Coordinator
T: 1-613-632-5200 ext. 228

www.dartaero.com
pduval@dartaero.com



DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					